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<110> Bayer Pharmaceuticals Corporation
Pauloski, Nicole
Liu, Li

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<213> Homo sapiens

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Val Pro Thr Asn Leu Tyr Gly Asp Phe Phe Thr Gly Asp Ala Tyr Val
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 Ile Trp Arg Ile Glu Gly Ser Asn Lys Val Pro Val Asp Pro Ala Thr
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 Tyr Gly Gln Phe Tyr Gly Gly Asp Ser Tyr Ile Ile Leu Tyr Asn Tyr
 465 470 475 480
 Arg His Gly Gly Arg Gln Gly Gln Ile Ile Tyr Asn Trp Gln Gly Ala
 485 490 495
 Gln Ser Thr Gln Asp Glu Val Ala Ala Ser Ala Ile Leu Thr Ala Gln
 500 505 510

Leu Asp Glu Glu Leu Gly Gly Thr Pro Val Gln Ser Arg Val Val Gln
 515 520 525
 Gly Lys Glu Pro Ala His Leu Met Ser Leu Phe Gly Gly Lys Pro Met
 530 535 540
 Ile Ile Tyr Lys Gly Gly Thr Ser Arg Glu Gly Gly Gln Thr Ala Pro
 545 550 555 560
 Ala Ser Thr Arg Leu Phe Gln Val Arg Ala Asn Ser Ala Gly Ala Thr
 565 570 575
 Arg Ala Val Glu Val Leu Pro Lys Ala Gly Ala Leu Asn Ser Asn Asp
 580 585 590
 Ala Phe Val Leu Lys Thr Pro Ser Ala Ala Tyr Leu Trp Val Gly Thr
 595 600 605
 Gly Ala Ser Glu Ala Glu Lys Thr Gly Ala Gln Glu Leu Leu Arg Val
 610 615 620
 Leu Arg Ala Gln Pro Val Gln Val Ala Glu Gly Ser Glu Pro Asp Gly
 625 630 635 640
 Phe Trp Glu Ala Leu Gly Gly Lys Ala Ala Tyr Arg Thr Ser Pro Arg
 645 650 655
 Leu Lys Asp Lys Lys Met Asp Ala His Pro Pro Arg Leu Phe Ala Cys
 660 665 670
 Ser Asn Lys Ile Gly Arg Phe Val Ile Glu Glu Val Pro Gly Glu Leu
 675 680 685
 Met Gln Glu Asp Leu Ala Thr Asp Asp Val Met Leu Leu Asp Thr Trp
 690 695 700
 Asp Gln Val Phe Val Trp Val Gly Lys Asp Ser Gln Glu Glu Glu Lys
 705 710 715 720
 Thr Glu Ala Leu Thr Ser Ala Lys Arg Tyr Ile Glu Thr Asp Pro Ala
 725 730 735
 Asn Arg Asp Arg Arg Thr Pro Ile Thr Val Val Lys Gln Gly Phe Glu
 740 745 750
 Pro Pro Ser Phe Val Gly Trp Phe Leu Gly Trp Asp Asp Asp Tyr Trp
 755 760 765
 Ser Val Asp Pro Leu Asp Arg Ala Met Ala Glu Leu Ala Ala
 770 775 780

<210> 21
 <211> 1594
 <212> PRT
 <213> Homo sapiens

<400> 21

Met Lys Leu Tyr Val Phe Leu Val Asn Thr Gly Thr Thr Leu Thr Phe
 1 5 10 15

Asp Thr Glu Leu Thr Val Gln Thr Val Ala Asp Leu Lys His Ala Ile
 20 25 30

Gln Ser Lys Tyr Lys Ile Ala Ile Gln His Gln Val Leu Val Val Asn
 35 40 45

Gly Gly Glu Cys Met Ala Ala Asp Arg Arg Val Cys Thr Tyr Ser Ala
 50 55 60

Gly Thr Asp Thr Asn Pro Ile Phe Leu Phe Asn Lys Glu Met Ile Leu
 65 70 75 80

Cys Asp Arg Pro Pro Ala Ile Pro Lys Thr Thr Phe Ser Thr Glu Asn
 85 90 95

Asp Met Glu Ile Lys Val Glu Glu Ser Leu Met Met Pro Ala Val Phe
 100 105 110

His Thr Val Ala Ser Arg Thr Gln Leu Ala Leu Glu Met Tyr Glu Val
 115 120 125

Ala Lys Lys Leu Cys Ser Phe Cys Glu Gly Leu Val His Asp Glu His
 130 135 140

Leu Gln His Gln Gly Trp Ala Ala Ile Met Ala Asn Leu Glu Asp Cys
 145 150 155 160

Ser Asn Ser Tyr Gln Lys Leu Leu Phe Lys Phe Glu Ser Ile Tyr Ser
 165 170 175

Asn Tyr Leu Gln Ser Ile Glu Asp Ile Lys Leu Lys Leu Thr His Leu
 180 185 190

Gly Thr Ala Val Ser Val Met Ala Lys Ile Pro Leu Leu Glu Cys Leu
 195 200 205

Thr Arg His Ser Tyr Arg Glu Cys Leu Gly Arg Leu Asp Ser Leu Pro
 210 215 220

Glu His Glu Asp Ser Glu Lys Ala Glu Thr Lys Arg Ser Thr Glu Leu
 225 230 235 240

Val Leu Ser Pro Asp₂₄₅ Met Pro Arg Thr Thr₂₅₀ Asn Glu Ser Leu Leu₂₅₅ Thr
 Ser Phe Pro Lys₂₆₀ Ser Val Glu His Val₂₆₅ Ser Pro Asp Thr Ala₂₇₀ Asp Ala
 Glu Ser Gly₂₇₅ Lys Glu Ile Arg Glu₂₈₀ Ser Cys Gln Ser Thr₂₈₅ Val His Gln
 Gln Asp₂₉₀ Glu Thr Thr Ile Asp₂₉₅ Thr Lys Asp Gly Asp₃₀₀ Leu Pro Phe Phe
 Asn Val₃₀₅ Ser Leu Leu Asp₃₁₀ Trp Ile Asn Val Gln₃₁₅ Asp Arg Pro Asn Asp₃₂₀
 Val Glu Ser Leu Val₃₂₅ Arg Lys Cys Phe Asp₃₃₀ Ser Met Ser Arg Leu₃₃₅ Asp
 Pro Arg Ile Ile₃₄₀ Arg Pro Phe Ile Ala₃₄₅ Glu Cys Arg Gln Thr₃₅₀ Ile Ala
 Lys Leu Asp₃₅₅ Asn Gln Asn Met Lys₃₆₀ Ala Ile Lys Gly Leu₃₆₅ Glu Asp Arg
 Leu Tyr₃₇₀ Ala Leu Asp Gln Met₃₇₅ Ile Ala Ser Cys Gly₃₈₀ Arg Leu Val Asn
 Glu Gln Lys Glu Leu Ala₃₉₀ Gln Gly Phe Leu Ala₃₉₅ Asn Gln Lys Arg Ala₄₀₀
 Glu Asn Leu Lys Asp₄₀₅ Ala Ser Val Leu Pro₄₁₀ Asp Leu Cys Leu Ser His₄₁₅
 Ala Asn Gln Leu Met Ile Met Leu Gln₄₂₅ Asn His Arg Lys Leu₄₃₀ Leu Asp
 Ile Lys Gln₄₃₅ Lys Cys Thr Thr Ala₄₄₀ Lys Gln Glu Leu Ala₄₄₅ Asn Asn Leu
 His Val₄₅₀ Arg Leu Lys Trp Cys₄₅₅ Cys Phe Val Met Leu₄₆₀ His Ala Asp Gln
 Asp Gly Glu Lys Leu Gln₄₇₀ Ala Leu Leu Arg Leu₄₇₅ Val Ile Glu Leu Leu₄₈₀
 Glu Arg Val Lys Ile₄₈₅ Val Glu Ala Leu Ser Thr Val Pro Gln Met₄₉₅ Tyr
 Cys Leu Ala Val₅₀₀ Val Glu Val Val Arg₅₀₅ Arg Lys Met Phe Ile₅₁₀ Lys His

Tyr Arg Glu Trp Ala Gly Ala Leu Val Lys Asp Gly Lys Arg Leu Tyr
 515 520 525
 Glu Ala Glu Lys Ser Lys Arg Glu Ser Phe Gly Lys Leu Phe Arg Lys
 530 535 540
 Ser Phe Leu Arg Asn Arg Leu Phe Arg Gly Leu Asp Ser Trp Pro Pro
 545 550 555 560
 Ser Phe Cys Thr Gln Lys Pro Arg Lys Phe Asp Cys Glu Leu Pro Asp
 565 570 575
 Ile Ser Leu Lys Asp Leu Gln Phe Leu Gln Ser Phe Cys Pro Ser Glu
 580 585 590
 Val Gln Pro Phe Leu Arg Val Pro Leu Leu Cys Asp Phe Glu Pro Leu
 595 600 605
 His Gln His Val Leu Ala Leu His Asn Leu Val Lys Ala Ala Gln Ser
 610 615 620
 Leu Asp Glu Met Ser Gln Thr Ile Thr Asp Leu Leu Ser Glu Gln Lys
 625 630 635 640
 Ala Ser Val Ser Gln Thr Ser Pro Gln Ser Ala Ser Ser Pro Arg Met
 645 650 655
 Glu Ser Thr Ala Gly Ile Thr Thr Thr Thr Ser Pro Arg Thr Pro Pro
 660 665 670
 Pro Leu Thr Val Gln Asp Pro Leu Cys Pro Ala Val Cys Pro Leu Glu
 675 680 685
 Glu Leu Ser Pro Asp Ser Ile Asp Ala His Thr Phe Asp Phe Glu Thr
 690 695 700
 Ile Pro His Pro Asn Ile Glu Gln Thr Ile His Gln Val Ser Leu Asp
 705 710 715 720
 Leu Asp Ser Leu Ala Glu Ser Pro Glu Ser Asp Phe Met Ser Ala Val
 725 730 735
 Asn Glu Phe Val Ile Glu Glu Asn Leu Ser Ser Pro Asn Pro Ile Ser
 740 745 750
 Asp Pro Gln Ser Pro Glu Met Met Val Glu Ser Leu Tyr Ser Ser Val
 755 760 765
 Ile Asn Ala Ile Asp Ser Arg Arg Met Gln Asp Thr Asn Val Cys Gly
 770 775 780

Lys Glu Asp Phe Gly Asp His Thr Ser Leu Asn Val Gln Leu Glu Arg
 785 790 795 800
 Cys Arg Val Val Ala Gln Asp Ser His Phe Ser Ile Gln Thr Ile Lys
 805 810 815
 Glu Asp Leu Cys His Phe Arg Thr Phe Val Gln Lys Glu Gln Cys Asp
 820 825 830
 Phe Ser Asn Ser Leu Lys Cys Thr Ala Val Glu Ile Arg Asn Ile Ile
 835 840 845
 Glu Lys Val Lys Cys Ser Leu Glu Ile Thr Leu Lys Glu Lys His Gln
 850 855 860
 Lys Glu Leu Leu Ser Leu Lys Asn Glu Tyr Glu Gly Lys Leu Asp Gly
 865 870 875 880
 Leu Ile Lys Glu Thr Glu Glu Asn Glu Asn Lys Ile Lys Lys Leu Lys
 885 890 895
 Gly Glu Leu Val Cys Leu Glu Glu Val Leu Gln Asn Lys Asp Asn Glu
 900 905 910
 Phe Ala Leu Val Lys His Glu Lys Glu Ala Val Ile Cys Leu Gln Asn
 915 920 925
 Glu Lys Asp Gln Lys Leu Leu Glu Met Glu Asn Ile Met His Ser Gln
 930 935 940
 Asn Cys Glu Ile Lys Glu Leu Lys Gln Ser Arg Glu Ile Val Leu Glu
 945 950 955 960
 Asp Leu Lys Lys Leu His Val Glu Asn Asp Glu Lys Leu Gln Leu Leu
 965 970 975
 Arg Ala Glu Leu Gln Ser Leu Glu Gln Ser His Leu Lys Glu Leu Glu
 980 985 990
 Asp Thr Leu Gln Val Arg His Ile Gln Glu Phe Glu Lys Val Met Thr
 995 1000 1005
 Asp His Arg Val Ser Leu Glu Glu Leu Lys Lys Glu Asn Gln Gln
 1010 1015 1020
 Ile Ile Asn Gln Ile Gln Glu Ser His Ala Glu Ile Ile Gln Glu
 1025 1030 1035
 Lys Glu Lys Gln Leu Gln Glu Leu Lys Leu Lys Val Ser Asp Leu
 1040 1045 1050

Ser Asp Thr Arg Cys Lys Leu Glu Val Glu Leu Ala Leu Lys Glu
 1055 1060 1065
 Ala Glu Thr Asp Glu Ile Lys Ile Leu Leu Glu Glu Ser Arg Ala
 1070 1075 1080
 Gln Gln Lys Glu Thr Leu Lys Ser Leu Leu Glu Gln Glu Thr Glu
 1085 1090 1095
 Asn Leu Arg Thr Glu Ile Ser Lys Leu Asn Gln Lys Ile Gln Asp
 1100 1105 1110
 Asn Asn Glu Asn Tyr Gln Val Gly Leu Ala Glu Leu Arg Thr Leu
 1115 1120 1125
 Met Thr Ile Glu Lys Asp Gln Cys Ile Ser Glu Leu Ile Ser Arg
 1130 1135 1140
 His Glu Glu Glu Ser Asn Ile Leu Lys Ala Glu Leu Asn Lys Val
 1145 1150 1155
 Thr Ser Leu His Asn Gln Ala Phe Glu Ile Glu Lys Asn Leu Lys
 1160 1165 1170
 Glu Gln Ile Ile Glu Leu Gln Ser Lys Leu Asp Ser Glu Leu Ser
 1175 1180 1185
 Ala Leu Glu Arg Gln Lys Asp Glu Lys Ile Thr Gln Gln Glu Glu
 1190 1195 1200
 Lys Tyr Glu Ala Ile Ile Gln Asn Leu Glu Lys Asp Arg Gln Lys
 1205 1210 1215
 Leu Val Ser Ser Gln Glu Gln Asp Arg Glu Gln Leu Ile Gln Lys
 1220 1225 1230
 Leu Asn Cys Glu Lys Asp Glu Ala Ile Gln Thr Ala Leu Lys Glu
 1235 1240 1245
 Phe Lys Leu Glu Arg Glu Val Val Glu Lys Glu Leu Leu Glu Lys
 1250 1255 1260
 Val Lys His Leu Glu Asn Gln Ile Ala Lys Ser Pro Ala Ile Asp
 1265 1270 1275
 Ser Thr Arg Gly Asp Ser Ser Ser Leu Val Ala Glu Leu Gln Glu
 1280 1285 1290
 Lys Leu Gln Glu Glu Lys Ala Lys Phe Leu Glu Gln Leu Glu Glu
 1295 1300 1305

Gln Glu Lys Arg Lys Asn Glu Glu Met Gln Asn Val Arg Thr Ser
 1310 1315 1320
 Leu Ile Ala Glu Gln Gln Thr Asn Phe Asn Thr Val Leu Thr Arg
 1325 1330 1335
 Glu Lys Met Arg Lys Glu Asn Ile Ile Asn Asp Leu Ser Asp Lys
 1340 1345 1350
 Leu Lys Ser Thr Met Gln Gln Gln Glu Arg Asp Lys Asp Leu Ile
 1355 1360 1365
 Glu Ser Leu Ser Glu Asp Arg Ala Arg Leu Leu Glu Glu Lys Lys
 1370 1375 1380
 Lys Leu Glu Glu Glu Val Ser Lys Leu Arg Ser Ser Ser Phe Val
 1385 1390 1395
 Pro Ser Pro Tyr Val Ala Thr Ala Pro Glu Leu Tyr Gly Ala Cys
 1400 1405 1410
 Ala Pro Glu Leu Pro Gly Glu Ser Asp Arg Ser Ala Val Glu Thr
 1415 1420 1425
 Ala Asp Glu Gly Arg Val Asp Ser Ala Met Glu Thr Ser Met Met
 1430 1435 1440
 Ser Val Gln Glu Asn Ile His Met Leu Ser Glu Glu Lys Gln Arg
 1445 1450 1455
 Ile Met Leu Leu Glu Arg Thr Leu Gln Leu Lys Glu Glu Glu Asn
 1460 1465 1470
 Lys Arg Leu Asn Gln Arg Leu Met Ser Gln Ser Met Ser Ser Val
 1475 1480 1485
 Ser Ser Arg His Ser Glu Lys Ile Ala Ile Arg Asp Phe Gln Val
 1490 1495 1500
 Gly Asp Leu Val Leu Ile Ile Leu Asp Glu Arg His Asp Asn Tyr
 1505 1510 1515
 Val Leu Phe Thr Val Ser Pro Thr Leu Tyr Phe Leu His Ser Glu
 1520 1525 1530
 Ser Leu Pro Ala Leu Asp Leu Lys Pro Gly Glu Gly Ala Ser Gly
 1535 1540 1545
 Ala Ser Arg Arg Pro Trp Val Leu Gly Lys Val Met Glu Lys Glu
 1550 1555 1560

Tyr Cys Gln Ala Lys Lys Ala Gln Asn Arg Phe Lys Val Pro Leu
 1565 1570 1575

Gly Thr Lys Phe Tyr Arg Val Lys Ala Val Ser Trp Asn Lys Lys
 1580 1585 1590

Val

<210> 22
 <211> 164
 <212> PRT
 <213> Homo sapiens

<400> 22

Met Ser Glu Pro Ala Gly Asp Val Arg Gln Asn Pro Cys Gly Ser Lys
 1 5 10 15

Ala Cys Arg Arg Leu Phe Gly Pro Val Asp Ser Glu Gln Leu Ser Arg
 20 25 30

Asp Cys Asp Ala Leu Met Ala Gly Cys Ile Gln Glu Ala Arg Glu Arg
 35 40 45

Trp Asn Phe Asp Phe Val Thr Glu Thr Pro Leu Glu Gly Asp Phe Ala
 50 55 60

Trp Glu Arg Val Arg Gly Leu Gly Leu Pro Lys Leu Tyr Leu Pro Thr
 65 70 75 80

Gly Pro Arg Arg Gly Arg Asp Glu Leu Gly Gly Gly Arg Arg Pro Gly
 85 90 95

Thr Ser Pro Ala Leu Leu Gln Gly Thr Ala Glu Glu Asp His Val Asp
 100 105 110

Leu Ser Leu Ser Cys Thr Leu Val Pro Arg Ser Gly Glu Gln Ala Glu
 115 120 125

Gly Ser Pro Gly Gly Pro Gly Asp Ser Gln Gly Arg Lys Arg Arg Gln
 130 135 140

Thr Ser Met Thr Asp Phe Tyr His Ser Lys Arg Arg Leu Ile Phe Ser
 145 150 155 160

Lys Arg Lys Pro

<210> 23
 <211> 313
 <212> PRT
 <213> Homo sapiens

<400> 23

Met Pro Val Ala Gly Ser Glu Leu Pro Arg Arg Pro Leu Pro Pro Ala
1 5 10 15

Ala Gln Glu Arg Asp Ala Glu Pro Arg Pro Pro His Gly Glu Leu Gln
20 25 30

Tyr Leu Gly Gln Ile Gln His Ile Leu Arg Cys Gly Val Arg Lys Asp
35 40 45

Asp Arg Thr Gly Thr Gly Thr Leu Ser Val Phe Gly Met Gln Ala Arg
50 55 60

Tyr Ser Leu Arg Asp Glu Phe Pro Leu Leu Thr Thr Lys Arg Val Phe
65 70 75 80

Trp Lys Gly Val Leu Glu Glu Leu Leu Trp Phe Ile Lys Gly Ser Thr
85 90 95

Asn Ala Lys Glu Leu Ser Ser Lys Gly Val Lys Ile Trp Asp Ala Asn
100 105 110

Gly Ser Arg Asp Phe Leu Asp Ser Leu Gly Phe Ser Thr Arg Glu Glu
115 120 125

Gly Asp Leu Gly Pro Val Tyr Gly Phe Gln Trp Arg His Phe Gly Ala
130 135 140

Glu Tyr Arg Asp Met Glu Ser Asp Tyr Ser Gly Gln Gly Val Asp Gln
145 150 155 160

Leu Gln Arg Val Ile Asp Thr Ile Lys Thr Asn Pro Asp Asp Arg Arg
165 170 175

Ile Ile Met Cys Ala Trp Asn Pro Arg Asp Leu Pro Leu Met Ala Leu
180 185 190

Pro Pro Cys His Ala Leu Cys Gln Phe Tyr Val Val Asn Ser Glu Leu
195 200 205

Ser Cys Gln Leu Tyr Gln Arg Ser Gly Asp Met Gly Leu Gly Val Pro
210 215 220

Phe Asn Ile Ala Ser Tyr Ala Leu Leu Thr Tyr Met Ile Ala His Ile
225 230 235 240

Thr Gly Leu Lys Pro Gly Asp Phe Ile His Thr Leu Gly Asp Ala His
245 250 255

Ile Tyr Leu Asn His Ile Glu Pro Leu Lys Ile Gln Leu Gln Arg Glu
260 265 270

Pro Arg Pro Phe Pro Lys Leu Arg Ile Leu Arg Lys Val Glu Lys Ile
275 280 285

Asp Asp Phe Lys Ala Glu Asp Phe Gln Ile Glu Gly Tyr Asn Pro His
290 295 300

Pro Thr Ile Lys Met Glu Met Ala Val
305 310

<210> 24
<211> 179
<212> PRT
<213> Homo sapiens

<400> 24

Met Ala Ser Gln Asn Arg Asp Pro Ala Ala Thr Ser Val Ala Ala Ala
1 5 10 15

Arg Lys Gly Ala Glu Pro Ser Gly Gly Ala Ala Arg Gly Pro Val Gly
20 25 30

Lys Arg Leu Gln Gln Glu Leu Met Thr Leu Met Met Ser Gly Asp Lys
35 40 45

Gly Ile Ser Ala Phe Pro Glu Ser Asp Asn Leu Phe Lys Trp Val Gly
50 55 60

Thr Ile His Gly Ala Ala Gly Thr Val Tyr Glu Asp Leu Arg Tyr Lys
65 70 75 80

Leu Ser Leu Glu Phe Pro Ser Gly Tyr Pro Tyr Asn Ala Pro Thr Val
85 90 95

Lys Phe Leu Thr Pro Cys Tyr His Pro Asn Val Asp Thr Gln Gly Asn
100 105 110

Ile Cys Leu Asp Ile Leu Lys Glu Lys Trp Ser Ala Leu Tyr Asp Val
115 120 125

Arg Thr Ile Leu Leu Ser Ile Gln Ser Leu Leu Gly Glu Pro Asn Ile
130 135 140

Asp Ser Pro Leu Asn Thr His Ala Ala Glu Leu Trp Lys Asn Pro Thr
145 150 155 160

Ala Phe Lys Lys Tyr Leu Gln Glu Thr Tyr Ser Lys Gln Val Thr Ser
165 170 175

Gln Glu Pro

<210> 25
 <211> 736
 <212> PRT
 <213> Homo sapiens

<400> 25

Met Lys Lys Ser Arg Ser Val Met Thr Val Met Ala Asp Asp Asn Val
 1 5 10 15

Lys Asp Tyr Phe Glu Cys Ser Leu Ser Lys Ser Tyr Ser Ser Ser Ser
 20 25 30

Asn Thr Leu Gly Ile Asp Leu Trp Arg Gly Arg Arg Cys Cys Ser Gly
 35 40 45

Asn Leu Gln Leu Pro Pro Leu Ser Gln Arg Gln Ser Glu Arg Ala Arg
 50 55 60

Thr Pro Glu Gly Asp Gly Ile Ser Arg Pro Thr Thr Leu Pro Leu Thr
 65 70 75 80

Thr Leu Pro Ser Ile Ala Ile Thr Thr Val Ser Gln Glu Cys Phe Asp
 85 90 95

Val Glu Asn Gly Pro Ser Pro Gly Arg Ser Pro Leu Asp Pro Gln Ala
 100 105 110

Ser Ser Ser Ala Gly Leu Val Leu His Ala Thr Phe Pro Gly His Ser
 115 120 125

Gln Arg Arg Glu Ser Phe Leu Tyr Arg Ser Asp Ser Asp Tyr Asp Leu
 130 135 140

Ser Pro Lys Ala Met Ser Arg Asn Ser Ser Leu Pro Ser Glu Gln His
 145 150 155 160

Gly Asp Asp Leu Ile Val Thr Pro Phe Ala Gln Val Leu Ala Ser Leu
 165 170 175

Arg Ser Val Arg Asn Asn Phe Thr Ile Leu Thr Asn Leu His Gly Thr
 180 185 190

Ser Asn Lys Arg Ser Pro Ala Ala Ser Gln Pro Pro Val Ser Arg Val
 195 200 205

Asn Pro Gln Glu Glu Ser Tyr Gln Lys Leu Ala Met Glu Thr Leu Glu
 210 215 220

Glu Leu Asp Trp Cys Leu Asp Gln Leu Glu Thr Ile Gln Thr Tyr Arg
 225 230 235 240

Ser Val Ser Glu Met Ala Ser Asn Lys Phe Lys Arg Met Leu Asn Arg
 245 250 255
 Glu Leu Thr His Leu Ser Glu Met Ser Arg Ser Gly Asn Gln Val Ser
 260 265 270
 Glu Tyr Ile Ser Asn Thr Phe Leu Asp Lys Gln Asn Asp Val Glu Ile
 275 280 285
 Pro Ser Pro Thr Gln Lys Asp Arg Glu Lys Lys Lys Lys Gln Gln Leu
 290 295 300
 Met Thr Gln Ile Ser Gly Val Lys Lys Leu Met His Ser Ser Ser Leu
 305 310 315 320
 Asn Asn Thr Ser Ile Ser Arg Phe Gly Val Asn Thr Glu Asn Glu Asp
 325 330 335
 His Leu Ala Lys Glu Leu Glu Asp Leu Asn Lys Trp Gly Leu Asn Ile
 340 345 350
 Phe Asn Val Ala Gly Tyr Ser His Asn Arg Pro Leu Thr Cys Ile Met
 355 360 365
 Tyr Ala Ile Phe Gln Glu Arg Asp Leu Leu Lys Thr Phe Arg Ile Ser
 370 375 380
 Ser Asp Thr Phe Ile Thr Tyr Met Met Thr Leu Glu Asp His Tyr His
 385 390 395 400
 Ser Asp Val Ala Tyr His Asn Ser Leu His Ala Ala Asp Val Ala Gln
 405 410 415
 Ser Thr His Val Leu Leu Ser Thr Pro Ala Leu Asp Ala Val Phe Thr
 420 425 430
 Asp Leu Glu Ile Leu Ala Ala Ile Phe Ala Ala Ala Ile His Asp Val
 435 440 445
 Asp His Pro Gly Val Ser Asn Gln Phe Leu Ile Asn Thr Asn Ser Glu
 450 455 460
 Leu Ala Leu Met Tyr Asn Asp Glu Ser Val Leu Glu Asn His His Leu
 465 470 475 480
 Ala Val Gly Phe Lys Leu Leu Gln Glu Glu His Cys Asp Ile Phe Met
 485 490 495
 Asn Leu Thr Lys Lys Gln Arg Gln Thr Leu Arg Lys Met Val Ile Asp
 500 505 510

Met Val Leu Ala Thr Asp Met Ser Lys His Met Ser Leu Leu Ala Asp
515 520 525

Leu Lys Thr Met Val Glu Thr Lys Lys Val Thr Ser Ser Gly Val Leu
530 535 540

Leu Leu Asp Asn Tyr Thr Asp Arg Ile Gln Val Leu Arg Asn Met Val
545 550 555 560

His Cys Ala Asp Leu Ser Asn Pro Thr Lys Ser Leu Glu Leu Tyr Arg
565 570 575

Gln Trp Thr Asp Arg Ile Met Glu Glu Phe Phe Gln Gln Gly Asp Lys
580 585 590

Glu Arg Glu Arg Gly Met Glu Ile Ser Pro Met Cys Asp Lys His Thr
595 600 605

Ala Ser Val Glu Lys Ser Gln Val Gly Phe Ile Asp Tyr Ile Val His
610 615 620

Pro Leu Trp Glu Thr Trp Ala Asp Leu Val Gln Pro Asp Ala Gln Asp
625 630 635 640

Ile Leu Asp Thr Leu Glu Asp Asn Arg Asn Trp Tyr Gln Ser Met Ile
645 650 655

Pro Gln Ser Pro Ser Pro Pro Leu Asp Glu Gln Asn Arg Asp Cys Gln
660 665 670

Gly Leu Met Glu Lys Phe Gln Phe Glu Leu Thr Leu Asp Glu Glu Asp
675 680 685

Ser Glu Gly Pro Glu Lys Glu Gly Glu Gly His Ser Tyr Phe Ser Ser
690 695 700

Thr Lys Thr Leu Cys Val Ile Asp Pro Glu Asn Arg Asp Ser Leu Gly
705 710 715 720

Glu Thr Asp Ile Asp Ile Ala Thr Glu Asp Lys Ser Pro Val Asp Thr
725 730 735

<210> 26
<211> 97
<212> PRT
<213> Homo sapiens

<400> 26

Met Cys Ser Ser Leu Glu Gln Ala Leu Ala Val Leu Val Thr Thr Phe
1 5 10 15

His Lys Tyr Ser Cys Gln Glu Gly Asp Lys Phe Lys Leu Ser Lys Gly
Page 41

20 25 30
 Glu Met Lys Glu Leu Leu His Lys Glu Leu Pro Ser Phe Val Gly Glu
 35 40 45
 Lys Val Asp Glu Glu Gly Leu Lys Lys Leu Met Gly Ser Leu Asp Glu
 50 55 60
 Asn Ser Asp Gln Gln Val Asp Phe Gln Glu Tyr Ala Val Phe Leu Ala
 65 70 75 80
 Leu Ile Thr Val Met Cys Asn Asp Phe Phe Gln Gly Cys Pro Asp Arg
 85 90 95

Pro

<210> 27
 <211> 271
 <212> PRT
 <213> Homo sapiens

<400> 27

Met Phe Arg Asp Phe Gly Glu Pro Gly Pro Ser Ser Gly Asn Gly Gly
 1 5 10 15
 Gly Tyr Gly Gly Pro Ala Gln Pro Pro Ala Ala Ala Gln Ala Ala Gln
 20 25 30
 Gln Lys Phe His Leu Val Pro Ser Ile Asn Thr Met Ser Gly Ser Gln
 35 40 45
 Glu Leu Gln Trp Met Val Gln Pro His Phe Leu Gly Pro Ser Ser Tyr
 50 55 60
 Pro Arg Pro Leu Thr Tyr Pro Gln Tyr Ser Pro Pro Gln Pro Arg Pro
 65 70 75 80
 Gly Val Ile Arg Ala Leu Gly Pro Pro Pro Gly Val Arg Arg Arg Pro
 85 90 95
 Cys Glu Gln Ile Ser Pro Glu Glu Glu Glu Arg Arg Arg Val Arg Arg
 100 105 110
 Glu Arg Asn Lys Leu Ala Ala Ala Lys Cys Arg Asn Arg Arg Lys Glu
 115 120 125
 Leu Thr Asp Phe Leu Gln Ala Glu Thr Asp Lys Leu Glu Asp Glu Lys
 130 135 140
 Ser Gly Leu Gln Arg Glu Ile Glu Glu Leu Gln Lys Gln Lys Glu Arg
 145 150 155 160

Leu Glu Leu Val Leu Glu Ala His Arg Pro Ile Cys Lys Ile Pro Glu
165 170 175

Gly Ala Lys Glu Gly Asp Thr Gly Ser Thr Ser Gly Thr Ser Ser Pro
180 185 190

Pro Ala Pro Cys Arg Pro Val Pro Cys Ile Ser Leu Ser Pro Gly Pro
195 200 205

Val Leu Glu Pro Glu Ala Leu His Thr Pro Thr Leu Met Thr Thr Pro
210 215 220

Ser Leu Thr Pro Phe Thr Pro Ser Leu Val Phe Thr Tyr Pro Ser Thr
225 230 235 240

Pro Glu Pro Cys Ala Ser Ala His Arg Lys Ser Ser Ser Ser Ser Gly
245 250 255

Asp Pro Ser Ser Asp Pro Leu Gly Ser Pro Thr Leu Leu Ala Leu
260 265 270

<210> 28
<211> 410
<212> PRT
<213> Homo sapiens

<400> 28

Met Ala Phe Leu Gly Leu Phe Ser Leu Leu Val Leu Gln Ser Met Ala
1 5 10 15

Thr Gly Ala Thr Phe Pro Glu Glu Ala Ile Ala Asp Leu Ser Val Asn
20 25 30

Met Tyr Asn Arg Leu Arg Ala Thr Gly Glu Asp Glu Asn Ile Leu Phe
35 40 45

Ser Pro Leu Ser Ile Ala Leu Ala Met Gly Met Met Glu Leu Gly Ala
50 55 60

Gln Gly Ser Thr Gln Lys Glu Ile Arg His Ser Met Gly Tyr Asp Ser
65 70 75 80

Leu Lys Asn Gly Glu Glu Phe Ser Phe Leu Lys Glu Phe Ser Asn Met
85 90 95

Val Thr Ala Lys Glu Ser Gln Tyr Val Met Lys Ile Ala Asn Ser Leu
100 105 110

Phe Val Gln Asn Gly Phe His Val Asn Glu Glu Phe Leu Gln Met Met
115 120 125

Lys Lys Tyr Phe Asn Ala Ala Val Asn His Val Asp Phe Ser Gln Asn
 130 135 140
 Val Ala Val Ala Asn Tyr Ile Asn Lys Trp Val Glu Asn Asn Thr Asn
 145 150 155 160
 Asn Leu Val Lys Asp Leu Val Ser Pro Arg Asp Phe Asp Ala Ala Thr
 165 170 175
 Tyr Leu Ala Leu Ile Asn Ala Val Tyr Phe Lys Gly Asn Trp Lys Ser
 180 185 190
 Gln Phe Arg Pro Glu Asn Thr Arg Thr Phe Ser Phe Thr Lys Asp Asp
 195 200 205
 Glu Ser Glu Val Gln Ile Pro Met Met Tyr Gln Gln Gly Glu Phe Tyr
 210 215 220
 Tyr Gly Glu Phe Ser Asp Gly Ser Asn Glu Ala Gly Gly Ile Tyr Gln
 225 230 235 240
 Val Leu Glu Ile Pro Tyr Glu Gly Asp Glu Ile Ser Met Met Leu Val
 245 250 255
 Leu Ser Arg Gln Glu Val Pro Leu Ala Thr Leu Glu Pro Leu Val Lys
 260 265 270
 Ala Gln Leu Val Glu Glu Trp Ala Asn Ser Val Lys Lys Gln Lys Val
 275 280 285
 Glu Val Tyr Leu Pro Arg Phe Thr Val Glu Gln Glu Ile Asp Leu Lys
 290 295 300
 Asp Val Leu Lys Ala Leu Gly Ile Thr Glu Ile Phe Ile Lys Asp Ala
 305 310 315 320
 Asn Leu Thr Gly Leu Ser Asp Asn Lys Glu Ile Phe Leu Ser Lys Ala
 325 330 335
 Ile His Lys Ser Phe Leu Glu Val Asn Glu Glu Gly Ser Glu Ala Ala
 340 345 350
 Ala Val Ser Gly Met Ile Ala Ile Ser Arg Met Ala Val Leu Tyr Pro
 355 360 365
 Gln Val Ile Val Asp His Pro Phe Phe Phe Leu Ile Arg Asn Arg Arg
 370 375 380
 Thr Gly Thr Ile Leu Phe Met Gly Arg Val Met His Pro Glu Thr Met
 385 390 395 400

Asn Thr Ser Gly His Asp Phe Glu Glu Leu
405 410

<210> 29
<211> 280
<212> PRT
<213> Homo sapiens

<400> 29

Met Leu Ser Ala Val Ala Arg Gly Tyr Gln Gly Trp Phe His Pro Cys
1 5 10 15

Ala Arg Leu Ser Val Arg Met Ser Ser Thr Gly Ile Asp Arg Lys Gly
20 25 30

Val Leu Ala Asn Arg Val Ala Val Val Thr Gly Ser Thr Ser Gly Ile
35 40 45

Gly Phe Ala Ile Ala Arg Arg Leu Ala Arg Asp Gly Ala His Val Val
50 55 60

Ile Ser Ser Arg Lys Gln Gln Asn Val Asp Arg Ala Met Ala Lys Leu
65 70 75 80

Gln Gly Glu Gly Leu Ser Val Ala Gly Ile Val Cys His Val Gly Lys
85 90 95

Ala Glu Asp Arg Glu Gln Leu Val Ala Lys Ala Leu Glu His Cys Gly
100 105 110

Gly Val Asp Phe Leu Val Cys Ser Ala Gly Val Asn Pro Leu Val Gly
115 120 125

Ser Thr Leu Gly Thr Ser Glu Gln Ile Trp Asp Lys Ile Leu Ser Val
130 135 140

Asn Val Lys Ser Pro Ala Leu Leu Leu Ser Gln Leu Leu Pro Tyr Met
145 150 155 160

Glu Asn Arg Arg Gly Ala Val Ile Leu Val Ser Ser Ile Ala Ala Tyr
165 170 175

Asn Pro Val Val Ala Leu Gly Val Tyr Asn Val Ser Lys Thr Ala Leu
180 185 190

Leu Gly Leu Thr Arg Thr Leu Ala Leu Glu Leu Ala Pro Lys Asp Ile
195 200 205

Arg Val Asn Cys Val Val Pro Gly Ile Ile Lys Thr Asp Phe Ser Lys
210 215 220

Val Phe His Gly Asn Glu Ser Leu Trp Lys Asn Phe Lys Glu His His
225 230 235 240

Gln Leu Gln Arg Ile Gly Glu Ser Glu Asp Cys Ala Gly Ile Val Ser
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Phe Leu Cys Ser Pro Asp Ala Ser Tyr Val Asn Gly Glu Asn Ile Ala
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Val Ala Gly Tyr Ser Thr Arg Leu
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<213> Homo sapiens
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Ser Phe Ser Trp Asp Asn Cys Asp Glu Gly Lys Asp Pro Ala Val Ile
35 40 45

Arg Ser Leu Thr Leu Glu Pro Asp Pro Ile Ile Val Pro Gly Asn Val
50 55 60

Thr Leu Ser Val Met Gly Ser Thr Ser Val Pro Leu Ser Ser Pro Leu
65 70 75 80

Lys Val Asp Leu Val Leu Glu Lys Glu Val Ala Gly Leu Trp Ile Lys
85 90 95

Ile Pro Cys Thr Asp Tyr Ile Gly Ser Cys Thr Phe Glu His Phe Cys
100 105 110

Asp Val Leu Asp Met Leu Ile Pro Thr Gly Glu Pro Cys Pro Glu Pro
115 120 125

Leu Arg Thr Tyr Gly Leu Pro Cys His Cys Pro Phe Lys Glu Gly Thr
130 135 140

Tyr Ser Leu Pro Lys Ser Glu Phe Val Val Pro Asp Leu Glu Leu Pro
145 150 155 160

Ser Trp Leu Thr Thr Gly Asn Tyr Arg Ile Glu Ser Val Leu Ser Ser
165 170 175

Ser Gly Lys Arg Leu Gly Cys Ile Lys Ile Ala Ala Ser Leu Lys Gly
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180

185

190

Ile

<210> 31
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 <213> Homo sapiens
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Met Ser Glu Met Ala Glu Leu Ser Glu Leu Tyr Glu Glu Ser Ser Asp
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 35 40 45
 Ala Gln Gln Leu Glu Glu Glu Gly Pro Met Glu Glu Glu Glu Ala Gln
 50 55 60
 Pro Met Ala Ala Pro Glu Gly Lys Arg Ser Leu Ala Asn Gly Pro Asn
 65 70 75 80
 Ala Gly Glu Gln Pro Gly Gln Val Ala Gly Ala Asp Phe Glu Ser Glu
 85 90 95
 Asp Glu Gly Glu Glu Phe Asp Asp Trp Glu Asp Asp Tyr Asp Tyr Pro
 100 105 110
 Glu Glu Glu Gln Leu Ser Gly Ala Gly Tyr Arg Val Ser Ala Ala Leu
 115 120 125
 Glu Glu Ala Asp Lys Met Phe Leu Arg Thr Arg Glu Pro Ala Leu Asp
 130 135 140
 Gly Gly Phe Gln Met His Tyr Glu Lys Thr Pro Phe Asp Gln Leu Ala
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 Cys Thr Cys Tyr Gly Gly Ser Arg Gly Phe Asn Cys Glu Ser Lys Pro
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 Glu Ala Glu Glu Thr Cys Phe Asp Lys Tyr Thr Gly Asn Thr Tyr Arg
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 Val Gly Asp Thr Tyr Glu Arg Pro Lys Asp Ser Met Ile Trp Asp Cys
 85 90 95
 Thr Cys Ile Gly Ala Gly Arg Gly Arg Ile Ser Cys Thr Ile Ala Asn
 100 105 110
 Arg Cys His Glu Gly Gly Gln Ser Tyr Lys Ile Gly Asp Thr Trp Arg
 115 120 125
 Arg Pro His Glu Thr Gly Gly Tyr Met Leu Glu Cys Val Cys Leu Gly
 130 135 140
 Asn Gly Lys Gly Glu Trp Thr Cys Lys Pro Ile Ala Glu Lys Cys Phe
 145 150 155 160
 Asp His Ala Ala Gly Thr Ser Tyr Val Val Gly Glu Thr Trp Glu Lys
 165 170 175
 Pro Tyr Gln Gly Trp Met Met Val Asp Cys Thr Cys Leu Gly Glu Gly
 180 185 190
 Ser Gly Arg Ile Thr Cys Thr Ser Arg Asn Arg Cys Asn Asp Gln Asp
 195 200 205
 Thr Arg Thr Ser Tyr Arg Ile Gly Asp Thr Trp Ser Lys Lys Asp Asn
 210 215 220
 Arg Gly Asn Leu Leu Gln Cys Ile Cys Thr Gly Asn Gly Arg Gly Glu
 225 230 235 240
 Trp Lys Cys Glu Arg His Thr Ser Val Gln Thr Thr Ser Ser Gly Ser
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 Gly Pro Phe Thr Asp Val Arg Ala Ala Val Tyr Gln Pro Gln Pro His
 260 265 270

Pro Gln Pro Pro Pro Tyr Gly His Cys Val Thr Asp Ser Gly Val Val
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 Phe Thr Tyr Asn Gly Arg Thr Phe Tyr Ser Cys Thr Thr Glu Gly Arg
 340 345 350
 Gln Asp Gly His Leu Trp Cys Ser Thr Thr Ser Asn Tyr Glu Gln Asp
 355 360 365
 Gln Lys Tyr Ser Phe Cys Thr Asp His Thr Val Leu Val Gln Thr Gln
 370 375 380
 Gly Gly Asn Ser Asn Gly Ala Leu Cys His Phe Pro Phe Leu Tyr Asn
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 Asn His Asn Tyr Thr Asp Cys Thr Ser Glu Gly Arg Arg Asp Asn Met
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 Lys Trp Cys Gly Thr Thr Gln Asn Tyr Asp Ala Asp Gln Lys Phe Gly
 420 425 430
 Phe Cys Pro Met Ala Ala His Glu Glu Ile Cys Thr Thr Asn Glu Gly
 435 440 445
 Val Met Tyr Arg Ile Gly Asp Gln Trp Asp Lys Gln His Asp Met Gly
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 Thr Tyr Asn Val Asn Asp Thr Phe His Lys Arg His Glu Glu Gly His
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 530 535 540

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 Ser His Ile Ser Lys Tyr Ile Leu Arg Trp Arg Pro Lys Asn Ser Val
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 Gly Arg Trp Lys Glu Ala Thr Ile Pro Gly His Leu Asn Ser Tyr Thr
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 645 650 655
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 Gln Tyr Leu Asp Leu Pro Ser Thr Ala Thr Ser Val Asn Ile Pro Asp
 740 745 750
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 Asp Gly Glu Gln Ser Leu Ile Leu Ser Thr Ser Gln Thr Thr Ala Pro
 770 775 780
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 785 790 795 800
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Val Tyr Ser Pro Ser Val Glu Gly Ser Ser Thr Glu Leu Asn Leu Pro
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Glu Thr Ala Asn Ser Val Thr Leu Ser Asp Leu Gln Pro Gly Val Gln
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Asp Val Ile Pro Val Asn Leu Pro Gly Glu His Gly Gln Arg Leu Pro
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Thr Tyr Tyr Phe Lys Val Phe Ala Val Ser His Gly Arg Glu Ser Lys
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 980 985 990

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 Pro Asp Thr Gly Val Leu Thr Val Ser Trp Glu Arg Ser Thr Thr
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 Pro Asp Ile Thr Gly Tyr Arg Ile Thr Thr Thr Pro Thr Asn Gly
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 1325 1330 1335

Phe Ser Asp Ile Thr Ala Asn Ser Phe Thr Val His Trp Ile Ala
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 Pro Arg Ala Thr Ile Thr Gly Tyr Arg Ile Arg His His Pro Glu
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 His Phe Ser Gly Arg Pro Arg Glu Asp Arg Val Pro His Ser Arg
 1370 1375 1380
 Asn Ser Ile Thr Leu Thr Asn Leu Thr Pro Gly Thr Glu Tyr Val
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 Val Ser Ile Val Ala Leu Asn Gly Arg Glu Glu Ser Pro Leu Leu
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 Ile Gly Gln Gln Ser Thr Val Ser Asp Val Pro Arg Asp Leu Glu
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 Val Val Ala Ala Thr Pro Thr Ser Leu Leu Ile Ser Trp Asp Ala
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 Gly Gly Asn Ser Pro Val Gln Glu Phe Thr Val Pro Gly Ser Lys
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 Ile Thr Val Tyr Ala Val Thr Gly Arg Gly Asp Ser Pro Ala Ser
 1490 1495 1500
 Ser Lys Pro Ile Ser Ile Asn Tyr Arg Thr Glu Ile Asp Lys Pro
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 Ser Gln Met Gln Val Thr Asp Val Gln Asp Asn Ser Ile Ser Val
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 Thr Thr Pro Lys Asn Gly Pro Gly Pro Thr Lys Thr Lys Thr Ala
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 Gly Pro Asp Gln Thr Glu Met Thr Ile Glu Gly Leu Gln Pro Thr
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 Val Glu Tyr Val Val Ser Val Tyr Ala Gln Asn Pro Ser Gly Glu
 1580 1585 1590

Ser Gln Pro Leu Val Gln Thr Ala Val Thr Asn Ile Asp Arg Pro
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 Lys Gly Leu Ala Phe Thr Asp Val Asp Val Asp Ser Ile Lys Ile
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 Ala Trp Glu Ser Pro Gln Gly Gln Val Ser Arg Tyr Arg Val Thr
 1625 1630 1635
 Tyr Ser Ser Pro Glu Asp Gly Ile His Glu Leu Phe Pro Ala Pro
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 Asp Gly Glu Glu Asp Thr Ala Glu Leu Gln Gly Leu Arg Pro Gly
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 Ser Glu Tyr Thr Val Ser Val Val Ala Leu His Asp Asp Met Glu
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 Ala Pro Asp Ser Ser Ser Val Val Val Ser Gly Leu Met Val Ala
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 Ile Lys Pro Asp Val Arg Ser Tyr Thr Ile Thr Gly Leu Gln Pro
 1835 1840 1845

Gly Thr Asp Tyr Lys Ile Tyr Leu Tyr Thr Leu Asn Asp Asn Ala
 1850 1855 1860
 Arg Ser Ser Pro Val Val Ile Asp Ala Ser Thr Ala Ile Asp Ala
 1865 1870 1875
 Pro Ser Asn Leu Arg Phe Leu Ala Thr Thr Pro Asn Ser Leu Leu
 1880 1885 1890
 Val Ser Trp Gln Pro Pro Arg Ala Arg Ile Thr Gly Tyr Ile Ile
 1895 1900 1905
 Lys Tyr Glu Lys Pro Gly Ser Pro Pro Arg Glu Val Val Pro Arg
 1910 1915 1920
 Pro Arg Pro Gly Val Thr Glu Ala Thr Ile Thr Gly Leu Glu Pro
 1925 1930 1935
 Gly Thr Glu Tyr Thr Ile Tyr Val Ile Ala Leu Lys Asn Asn Gln
 1940 1945 1950
 Lys Ser Glu Pro Leu Ile Gly Arg Lys Lys Thr Asp Glu Leu Pro
 1955 1960 1965
 Gln Leu Val Thr Leu Pro His Pro Asn Leu His Gly Pro Glu Ile
 1970 1975 1980
 Leu Asp Val Pro Ser Thr Val Gln Lys Thr Pro Phe Val Thr His
 1985 1990 1995
 Pro Gly Tyr Asp Thr Gly Asn Gly Ile Gln Leu Pro Gly Thr Ser
 2000 2005 2010
 Gly Gln Gln Pro Ser Val Gly Gln Gln Met Ile Phe Glu Glu His
 2015 2020 2025
 Gly Phe Arg Arg Thr Thr Pro Pro Thr Thr Ala Thr Pro Ile Arg
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 His Arg Pro Arg Pro Tyr Pro Pro Asn Val Gly Gln Glu Ala Leu
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 Ser Gln Thr Thr Ile Ser Trp Ala Pro Phe Gln Asp Thr Ser Glu
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 Tyr Ile Ile Ser Cys His Pro Val Gly Thr Asp Glu Glu Pro Leu
 2075 2080 2085
 Gln Phe Arg Val Pro Gly Thr Ser Thr Ser Ala Thr Leu Thr Gly
 2090 2095 2100

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 Asp Gln Gln Arg His Lys Val Arg Glu Glu Val Val Thr Val Gly
 2120 2125 2130
 Asn Ser Val Asn Glu Gly Leu Asn Gln Pro Thr Asp Asp Ser Cys
 2135 2140 2145
 Phe Asp Pro Tyr Thr Val Ser His Tyr Ala Val Gly Asp Glu Trp
 2150 2155 2160
 Glu Arg Met Ser Glu Ser Gly Phe Lys Leu Leu Cys Gln Cys Leu
 2165 2170 2175
 Gly Phe Gly Ser Gly His Phe Arg Cys Asp Ser Ser Arg Trp Cys
 2180 2185 2190
 His Asp Asn Gly Val Asn Tyr Lys Ile Gly Glu Lys Trp Asp Arg
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 Gln Gly Glu Asn Gly Gln Met Met Ser Cys Thr Cys Leu Gly Asn
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 Asp Asp Gly Lys Thr Tyr His Val Gly Glu Gln Trp Gln Lys Glu
 2240 2245 2250
 Tyr Leu Gly Ala Ile Cys Ser Cys Thr Cys Phe Gly Gly Gln Arg
 2255 2260 2265
 Gly Trp Arg Cys Asp Asn Cys Arg Arg Pro Gly Gly Glu Pro Ser
 2270 2275 2280
 Pro Glu Gly Thr Thr Gly Gln Ser Tyr Asn Gln Tyr Ser Gln Arg
 2285 2290 2295
 Tyr His Gln Arg Thr Asn Thr Asn Val Asn Cys Pro Ile Glu Cys
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<400> 33

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 Val Leu Ala Asn Arg Val Ala Val Val Thr Gly Ser Thr Ser Gly Ile
 35 40 45
 Gly Phe Ala Ile Ala Arg Arg Leu Ala Arg Asp Gly Ala His Val Val
 50 55 60
 Ile Ser Ser Arg Lys Gln Gln Asn Val Asp Arg Ala Met Ala Lys Leu
 65 70 75 80
 Gln Gly Glu Gly Leu Ser Val Ala Gly Ile Val Cys His Val Gly Lys
 85 90 95
 Ala Glu Asp Arg Glu Gln Leu Val Ala Lys Ala Leu Glu His Cys Gly
 100 105 110
 Gly Val Asp Phe Leu Val Cys Ser Ala Gly Val Asn Pro Leu Val Gly
 115 120 125
 Ser Thr Leu Gly Thr Ser Glu Gln Ile Trp Asp Lys Ile Leu Ser Val
 130 135 140
 Asn Val Lys Ser Pro Ala Leu Leu Leu Ser Gln Leu Leu Pro Tyr Met
 145 150 155 160
 Glu Asn Arg Arg Gly Ala Val Ile Leu Val Ser Ser Ile Ala Ala Tyr
 165 170 175
 Asn Pro Val Val Ala Leu Gly Val Tyr Asn Val Ser Lys Thr Ala Leu
 180 185 190
 Leu Gly Leu Thr Arg Thr Leu Ala Leu Glu Leu Ala Pro Lys Asp Ile
 195 200 205
 Arg Val Asn Cys Val Val Pro Gly Ile Ile Lys Thr Asp Phe Ser Lys
 210 215 220
 Val Phe His Gly Asn Glu Ser Leu Trp Lys Asn Phe Lys Glu His His
 225 230 235 240
 Gln Leu Gln Arg Ile Gly Glu Ser Glu Asp Cys Ala Gly Ile Val Ser
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Val Ala Gly Tyr Ser Thr Arg Leu
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<213> Homo sapiens

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Gly Asn Lys Val Ser Glu Gln Leu Gln Ala Lys Met Pro Met Lys Lys
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Glu Ala Lys Pro Ser Ala Thr Gly Lys Val Ile Asp Lys Lys Leu Pro
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Lys Pro Leu Glu Lys Val Pro Met Leu Val Pro Val Pro Val Ser Glu
85 90 95

Pro Val Pro Glu Pro Glu Pro Glu Pro Glu Pro Glu Pro Val Lys Glu
100 105 110

Glu Lys Leu Ser Pro Glu Pro Ile Leu Val Asp Thr Ala Ser Pro Ser
115 120 125

Pro Met Glu Thr Ser Gly Cys Ala Pro Ala Glu Glu Asp Leu Cys Gln
130 135 140

Ala Phe Ser Asp Val Ile Leu Ala Val Asn Asp Val Asp Ala Glu Asp
145 150 155 160

Gly Ala Asp Pro Asn Leu Cys Ser Glu Tyr Val Lys Asp Ile Tyr Ala
165 170 175

Tyr Leu Arg Gln Leu Glu Glu Glu Gln Ala Val Arg Pro Lys Tyr Leu
180 185 190

Leu Gly Arg Glu Val Thr Gly Asn Met Arg Ala Ile Leu Ile Asp Trp
195 200 205

Leu Val Gln Val Gln Met Lys Phe Arg Leu Leu Gln Glu Thr Met Tyr
210 215 220

Met Thr Val Ser Ile Ile Asp Arg Phe Met Gln Asn Asn Cys Val Pro
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val

<400> 35

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 50 55 60
 Asp Leu Thr Asp Lys His Arg Glu Ala Met Phe Ala Leu Pro Ala Glu
 65 70 75 80
 Lys Lys Trp Gln Ile Tyr Cys Ser Lys Lys Lys Asp Gln Glu Glu Asn
 85 90 95
 Lys Gly Ala Thr Ser Trp Pro Glu Phe Tyr Ile Asp Gln Leu Asn Ser
 100 105 110
 Met Ala Ala Arg Lys Ser Leu Leu Ala Leu Glu Lys Glu Glu Glu Glu
 115 120 125
 Glu Arg Ser Lys Thr Ile Glu Ser Leu Lys Thr Ala Leu Arg Thr Lys
 130 135 140
 Pro Met Arg Phe Val Thr Arg Phe Ile Asp Leu Asp Gly Leu Ser Cys
 145 150 155 160
 Ile Leu Asn Phe Leu Lys Thr Met Asp Tyr Glu Thr Ser Glu Ser Arg
 165 170 175
 Ile His Thr Ser Leu Ile Gly Cys Ile Lys Ala Leu Met Asn Asn Ser
 180 185 190
 Gln Gly Arg Ala His Val Leu Ala His Ser Glu Ser Ile Asn Val Ile
 195 200 205
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 210 215 220
 Glu Ile Leu Gly Ala Val Cys Leu Val Pro Gly Gly His Lys Lys Val
 225 230 235 240
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 245 250 255
 Phe Gln Thr Leu Ile Asn Asp Leu Asp Lys Ser Thr Gly Arg Tyr Arg
 260 265 270
 Asp Glu Val Ser Leu Lys Thr Ala Ile Met Ser Phe Ile Asn Ala Val
 275 280 285
 Leu Ser Gln Gly Ala Gly Val Glu Ser Leu Asp Phe Arg Leu His Leu
 290 295 300

Arg Tyr Glu Phe Leu Met Leu Gly Ile Gln Pro Val Ile Asp Lys Leu
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 Arg Glu His Glu Asn Ser Thr Leu Asp Arg His Leu Asp Phe Phe Glu
 325 330 335
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 Val His Ile Asp Thr Lys Ser Ala Thr Gln Met Phe Glu Leu Thr Arg
 355 360 365
 Lys Arg Leu Thr His Ser Glu Ala Tyr Pro His Phe Met Ser Ile Leu
 370 375 380
 His His Cys Leu Gln Met Pro Tyr Lys Arg Ser Gly Asn Thr Val Gln
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 Tyr Trp Leu Leu Leu Asp Arg Ile Ile Gln Gln Ile Val Ile Gln Asn
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 565 570 575

Pro Pro Gly Pro Pro Pro Leu Gly Ala Ile Met Pro Pro Pro Gly Ala
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 Gly Thr Val Trp Thr Glu Ile Asp Asp Thr Lys Val Phe Lys Ile Leu
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 Asp Phe Phe Val Asn Ser Asn Ser Lys Gln Lys Glu Ala Asp Ala Ile
 660 665 670
 Asp Asp Thr Leu Ser Ser Lys Leu Lys Val Lys Glu Leu Ser Val Ile
 675 680 685
 Asp Gly Arg Arg Ala Gln Asn Cys Asn Ile Leu Leu Ser Arg Leu Lys
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<400> 36

Met Val Leu Ala Trp Tyr Met Asp Asp Ala Pro Gly Asp Pro Arg Gln
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Pro His Arg Pro Asp Pro Gly Arg Pro Val Gly Leu Glu Gln Leu Arg
20 25 30

Arg Leu Gly Val Leu Tyr Trp Lys Leu Asp Ala Asp Lys Tyr Glu Asn
35 40 45

Asp Pro Glu Leu Glu Lys Ile Arg Arg Glu Arg Asn Tyr Ser Trp Met
50 55 60

Asp Ile Ile Thr Ile Cys Lys Asp Lys Leu Pro Asn Tyr Glu Glu Lys
65 70 75 80

Ile Lys Met Phe Tyr Glu Glu His Leu His Leu Asp Asp Glu Ile Arg
85 90 95

Tyr Ile Leu Asp Gly Ser Gly Tyr Phe Asp Val Arg Asp Lys Glu Asp
100 105 110

Gln Trp Ile Arg Ile Phe Met Glu Lys Gly Asp Met Val Thr Leu Pro
115 120 125

Ala Gly Ile Tyr His Arg Phe Thr Val Asp Glu Lys Asn Tyr Thr Lys
130 135 140

Ala Met Arg Leu Phe Val Gly Glu Pro Val Trp Thr Ala Tyr Asn Arg
145 150 155 160

Pro Ala Asp His Phe Glu Ala Arg Gly Gln Tyr Val Lys Phe Leu Ala
165 170 175

Gln Thr Ala

<210> 37
<211> 142
<212> PRT
<213> Homo sapiens

<400> 37

Met Gly Ala Pro Thr Leu Pro Pro Ala Trp Gln Pro Phe Leu Lys Asp
1 5 10 15

His Arg Ile Ser Thr Phe Lys Asn Trp Pro Phe Leu Glu Gly Cys Ala
20 25 30

Cys Thr Pro Glu Arg Met Ala Glu Ala Gly Phe Ile His Cys Pro Thr
35 40 45

Glu Asn Glu Pro Asp Leu Ala Gln Cys Phe Phe Cys Phe Lys Glu Leu
50 55 60

Glu Gly Trp Glu Pro Asp Asp Asp Pro Ile Glu Glu His Lys Lys His
65 70 75 80

Ser Ser Gly Cys Ala Phe Leu Ser Val Lys Lys Gln Phe Glu Glu Leu
85 90 95

Thr Leu Gly Glu Phe Leu Lys Leu Asp Arg Glu Arg Ala Lys Asn Lys
100 105 110

Ile Ala Lys Glu Thr Asn Asn Lys Lys Lys Glu Phe Glu Glu Thr Ala
115 120 125

Lys Lys Val Arg Arg Ala Ile Glu Gln Leu Ala Ala Met Asp
130 135 140